



Legislative Testimony of the Connecticut Green Bank
Energy and Technology Committee
March 3, 2022

Regarding Senate Bill 176
AN ACT CONCERNING SHARED CLEAN ENERGY FACILITIES

As the nation's first green bank, the Connecticut Green Bank ("Green Bank") leverages the limited public resources it receives to attract multiples of private investment to scale up clean energy deployment. Since its inception, the Green Bank has mobilized \$2.14 billion of investment into Connecticut's clean energy economy at a 7.4 to 1 leverage ratio of private to public funds, supported the creation of 25,612 direct, indirect and induced jobs, reduced the energy burden on over 63,000 families and businesses, deployed over 494 MW of clean renewable energy, helped avoid 9.9 million tons of CO2 emissions over the life of the projects, and generated \$107.4 million in individual income, corporate, and sales tax revenues to the State of Connecticut.

The Green Bank **Supports Senate Bill 176 with exception.**

Based on the Green Bank's reading of Senate Bill 176 "An Act Concerning Shared Clean Energy Facilities" ("the Bill"), the Bill would:

- **Project Size Cap** – increase the size cap of projects located onsite from two (2) megawatts to five (5) megawatts.
- **Reallocate Benefits** – increase allocation for low-income customers from no less than ten (10) percent to no less than twenty (20) percent, and low-income, moderate-income, or low-income service organizations from no less than ten (10) percent to no less than sixty (60) percent.
- **Projects Located in Environmental Justice Communities** – require the program to locate no less than forty (40) percent of the shared clean energy facilities in environmental justice communities.
- **Increase Annual Program Cap** – increase the annual allocation of the program from twenty-five (25) megawatts to thirty-five (35) megawatts.
- **Utility Ownership** – allow the electric distribution companies ("EDC") to submit proposals under the program to own one or more solar power electrical generation facilities.

- **Rooftop Allowance** – allow commercial and industrial customers to utilize their entire rooftops to support the program.

To the extent that the project size caps allow for the improvement in economies of scale to selected projects from developers (e.g., 5 MW project has a better bid price than a 2 MW project), then ratepayer costs to support the program will come down in terms of supporting the long-term contracts between the developers and the EDCs. The same case can be made for maximizing the rooftop potential from commercial and industrial project locations, while at the same time reducing development pressures on Connecticut's open space (i.e., farmlands and forestlands). These economies of scale, if achieved, may offset the increase in the annual program cap by an additional ten (10) megawatts from the long-term contracts between the developers and the EDCs. This could reduce ratepayer costs for the additional capacity, while increasing the number of participating customers (e.g., low-income) in the program.

In terms of the reallocation of benefits, the Green Bank would be supportive of one hundred (100) percent of the benefits being directed at low-income, moderate-income, or low-income service organizations. The benefits from the Shared Clean Energy Facilities Program ("SCEF Program") should accrue to vulnerable communities,¹ as these are communities that have contributed the least to climate change but will be impacted the most by climate change.

In terms of projects located in environmental justice communities, the Green Bank suspects that the policy intent is to ensure that the benefits (i.e., subscriber credit of \$0.025/kWh) accrue to more low-income customers. Although CGS 22a-20a exempts such affecting facilities such as those submitted under SCEF, it may be the case that environmental justice communities don't want any industrial development, let alone clean energy deployment, occur in their communities given current and past developments. The Green Bank would caution the inclusion of this aspect of the public policy unless there are benefits beyond the subscriber credit that can be directed at families living in the same environmental justice communities (e.g., local jobs, community ownership of projects, etc.) where the SCEF facilities would be located. Environmental justice communities already can receive the benefits from the subscriber credit without having to locate a SCEF within the community.

In terms of EDC ownership of SCEF, the Green Bank sees this as problematic given their role in the SCEF program. We believe there could be a number of issues raised with respect to transparency in the marketplace, for instance. For example, the EDCs have knowledge about where the electric distribution system could benefit the most from appropriately sited SCEF projects. However, market participants do not have such information and are therefore at a competitive disadvantage given one party having more information than another. For this reason, Green Bank supports Senate Bill 176 with this exception.

It is important to note that any and all data on the program from submitters and successful winners, should be publicly disclosed at an appropriate future point in time (e.g., one year following the opening of a request for proposals round, prior to the subsequent round). If such adjustments as are being proposed by the Bill are intended to result in more clean energy deployment at a lower cost per kW of deployment to ratepayers, then program information should be made publicly available to discern that such public policy objectives are being achieved.

¹ As defined by Public Act 20-05

Consideration should be given to allowing the subscriber credit received by participating customers to be used as a financing mechanism to increase energy savings through the SCEF program. For example, a subscriber credit of \$0.025/kWh can, on average,² generate \$210 of value a year. Customers can receive such subscriber credit for a period of twenty (20) years – or a nominal value of \$4,200. The present value of subscriber savings is \$2,600.³ If customers were able to invest the present value of their subscriber credits in onsite energy efficiency (e.g., insulation), then there is the potential for them to receive greater energy savings per year beyond those provided by the subscriber credits (i.e., \$250 of energy savings from insulation is greater than \$210 of subscriber credits under SCEF). The SCEF policy has the potential to not only lead to the production of more clean energy, but it can also support the achievement of the weatherization goal of eighty (80) percent of residential units by 2030 while creating more energy efficiency jobs in our communities.⁴

Please find attached to this testimony the Green Bank's Decennial Societal Impact Report and the Residential Solar Investment Program wrap-up fact sheet.

Questions on this document may be submitted to Matt Macunas, Legislative Liaison and Associate Director of Regulatory Policy, reachable at matt.macunas@ctgreenbank.com or at (860) 257-2889.

² Assuming 700 kWh of electricity consumption per month

³ 5% discount rate

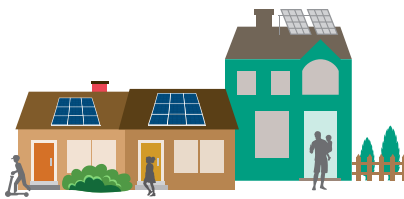
⁴ It should be noted that the Green Bank has demonstrated such a financing approach by issuing Green Liberty Bonds to support the cash flow needs to support CGS 16-245ff (i.e., Residential Solar Investment Program)



Connecticut Green Bank is the nation's first green bank. Our mission is to confront climate change and provide all of society with a healthier and more prosperous future by increasing and accelerating the flow of private capital into markets that energize the green economy. Established in 2011 as a quasi-public agency, the Green Bank uses limited public dollars to attract private capital investment and offers green solutions that help people, businesses and all of Connecticut thrive.

our solutions

The Green Bank is helping Connecticut flourish by offering green solutions for homes and buildings, and by creating innovative ways to invest in the green economy.



homes



Empowering all Connecticut families and households with accessible and affordable green solutions that bring them comfort and security. Find incentives for battery storage or use the Green Bank's flexible financing to reduce costs with health and safety improvements and the newest energy efficient technologies.



buildings



Creating stronger, more resilient communities with green solutions for buildings of all types, from businesses and nonprofits to multifamily housing and local government. Leverage Green Bank financing to save money and realize the benefits of more modern, sustainable buildings.



investments



Securing a healthier planet with smart ways for individuals and businesses to invest in green solutions – and our future – while also earning a return. Energize the green economy by investing in it today. Buy a Green Liberty Bond, invest through a crowdfunding offering, or join the movement by finding other ways to invest.

Decennial Societal Impact Report

FY12
FY21

Since the Connecticut Green Bank's inception through the bipartisan legislation in July 2011, we have mobilized more than **\$2.14 billion of investment** into the State's green economy. To do this, we used **\$288.4 million** in Green Bank dollars to attract \$1.85 billion in private investment, a leverage ratio of **\$7.40 for every \$1**. The impact of our deployment of renewable energy and energy efficiency to families, businesses, and our communities is shown in terms of economic development, environmental protection, equity, and energy (data from FY 2012 through FY 2021).

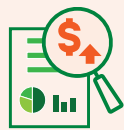
ECONOMIC DEVELOPMENT

JOBS The Green Bank has supported the creation of more than **25,612** direct, indirect, and induced job-years.



TAX REVENUES

The Green Bank's activities have helped generate an estimated **\$107.4 million** in state tax revenues.



\$52.8 million
individual income tax

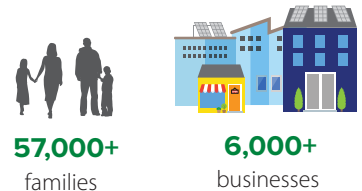
\$27.5 million
corporate taxes

\$27.1 million
sales taxes

ENERGY

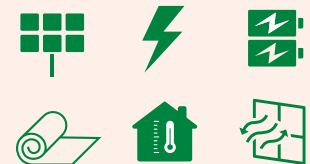
ENERGY BURDEN

The Green Bank has reduced the energy costs on families, businesses, and our communities.



DEPLOYMENT

The Green Bank has accelerated the growth of renewable energy to more than **494 MW** and lifetime savings of over **64.1 million MMBTUs** through energy efficiency projects.



ENVIRONMENTAL PROTECTION

POLLUTION The Green Bank has helped reduce air emissions that cause climate change and worsen public health, including **9.3 million pounds** of SOx and **10.7 million pounds** of NOx.



9.9 MILLION
tons of CO₂ :



163 MILLION
tree seedlings
grown for 10 years

OR



2.1 MILLION
passenger vehicles
driven for one year

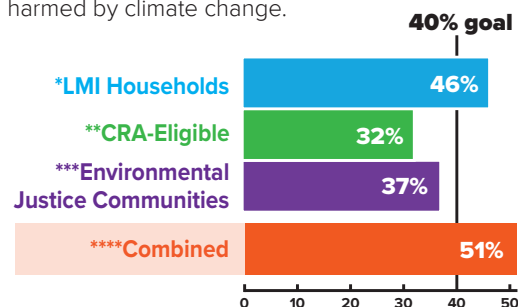
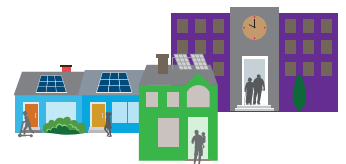
PUBLIC HEALTH The Green Bank has improved the lives of families, helping them avoid sick days, hospital visits, and even death.

\$298.1 – \$674.1 million of lifetime public health value created



EQUITY

INVESTING in vulnerable communities, The Green Bank has set **goals** to reach **40% investment** in communities that may be disproportionately harmed by climate change.



*LMI Households – households at or below 100% Area Median Income.

**Community Reinvestment Act (CRA) Eligible – households at or below 80% of Area Median Income and all projects in programs designed to assist LMI customers.

***Environmental Justice Community means a municipality that has been designated as distressed by Connecticut Department of Economic and Community Development (DECD) or a census block group for which 30% or more of the population have an income below 200% of the federal poverty level.

****Combined Vulnerable Communities include LMI, CRA and EJC.



Learn more by visiting ctgreenbank.com/strategy-impact/impact

Winner of the 2017 Harvard Kennedy School Ash Center Award for Innovation in American Government, the Connecticut Green Bank is the nation's first green bank.

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Sources: Connecticut Green Bank Annual Comprehensive Financial Reports.



When panels produce electricity to save money, they also create **Solar Home Renewable Energy Credits (SHRECs)**.

Utilities enter into **Master Purchase Agreements (MPAs)** with the Green Bank to buy SHRECs to comply with policy programs.

Green Bonds are created via SHREC revenue, and purchased by both individual and institutional buyers.

The **Residential Solar Investment Program (RSIP)** provides rebates and incentives to make rooftop solar more affordable for homeowners.

Revenue from MPAs and Green Bonds support RSIP incentives and cover administrative costs.

Residential Solar Investment Program (RSIP)

Through a network of contractors, the Green Bank helped **43,000+ households** access solar energy since 2012, surpassing the statutory target of 350 MW one year ahead of the December 2022 deadline.

\$1.33 billion
Total investment

\$149.7 million
Total incentive

\$0.43/W*
Incentive (\$31 per Zero Emission Renewable Energy Credit Equivalent)

\$3.80/W
Installed Cost



Solar Power Generation

350 MW Capacity
 9,966,706 MWh Estimated lifetime generation



Solar and Energy Efficiency for All

- **50%** of RSIP projects have been deployed in **vulnerable communities**
- **98%** of RSIP projects had **energy audits** (i.e., Home Energy Solutions)



SHREC Backed Bonds

Consumer demand is greater than the supply of bonds, showing consumers' high interest in supporting investment to confront climate change in Connecticut.

Green bonds are certified and verified by a third-party for consumer protection.



Connecticut's Solar Industry

15,437 Jobs created
 \$41.9 million Tax revenue generated

6,291 Direct **9,146 Indirect and induced**



Environmental Impact

Through the production of zero emission renewable energy, the lifetime reduction of greenhouse gases is equivalent to:

5.5 million
Tons of CO₂

606,686
Homes energy use

6.1 million
Acres of forests

12.6 billion
Miles driven

\$397.8 million Public health cost reduction from cleaner air

*Average incentive over life of the program